DP-303157

IN THE SPECIFICATION

Please substitute the following paragraph for the paragraph on page 3, lines 3-5.

Referring ~~should be made~~ to the ~~following detailed description taken in conjunction with the accompanying~~ drawing, which is meant to be exemplary and non-limiting: ~~, not limiting.~~

Please substitute the following paragraph for the paragraph on page 4, lines 21-29.

For example, conventional catalyst substrates can comprise about 400 cells per square inch, with cell walls having a thickness of about 8 to 10 mils~~mills~~, wherein one mil ~~mill~~ is equal to about 0.001 inches or about 0.025 millimeters. The thin walled, high cell density catalyst substrates can preferably comprise up to and exceeding about 1,200 cells per square inch, with cell walls having a thickness of about 2 mils ~~mills~~ to about 3.5 mils~~mills~~, with about 2.5 mils ~~mills~~ preferred, and about 2 mils ~~mills~~ especially preferred.

Please substitute the following paragraph for the paragraph on page 6, lines 3-9.

In contrast, cordierite possesses a lower density of about 2.44 g/cc, an open porosity percentage of about zero, and a thermal conductivity value of about 14 BTU-in/hr-ft^2-°F. Unlike zirconium phosphate, acidic conditions will etch a cordierite based catalyst substrate's surface, and weaken its structural integrity. In addition, a cordierite based catalyst substrate can only withstand a maximum service temperature of up to about 1,000~~1,0~~°C, and possess a low tolerance to thermal shock resistance.

DP-303157

Please substitute the following paragraph for the paragraph on page 8, lines 2-19.

A soft, wet catalyst substrate material comprising a mixture cordierite, up to about 70% by weight of zirconium, is extruded through a die with patterned openings to form a cell structure arranged in a honeycomb pattern. The catalyst substrate contains up to and exceeding about 1200 cells per square inch, with cell walls having a thickness of about 2 mils~~mills~~. The catalyst substrate is calcined for approximately two hours at approximately 1460°C. Once cooled, the catalyst substrate is then dipped into a solution comprising about 100 grams of zirconium carbonate-, and about one liter of phosphoric acid. A layer of zirconium phosphate having a thickness of approximately 4 nanometers forms on the catalyst substrate surface. The catalyst substrate is then calcined for approximately two hours at approximately 500°C. Once the catalyst substrate has cooled, a catalyst washcoat, comprising conventional catalyst materials and soluble binder material, is then wash-coated, imbibed, impregnated, physisorbed, chemisorbed, or otherwise applied to the catalyst substrate. The catalyst substrate is then calcined for approximately 2 hours at approximately 500°C. The resulting catalyst substrate comprises a catalyst washcoat layer disposed upon a zirconium phosphate layer that covers the catalyst substrate surface.